

IN THE CLAIMS:

Please cancel claims 12, 15 and 18 to 30 without prejudice, and amend the claims as follows:

Claims 1 to 10 (canceled).

11. (currently amended) A method for producing a synthetic quartz glass member said method comprising:

a step of incorporating hydrogen molecules into a synthetic quartz glass body by heat treating the synthetic quartz glass body at a temperature of 600 °C or lower in an atmosphere in a pressure range of 1 atm or higher but lower than 150 atm, said atmosphere containing hydrogen,

the pressure of the atmosphere containing hydrogen being varied either continuously or stepwise in at least a part of the heat treatment; **and**

**wherein the pressure of the atmosphere containing hydrogen is decreased during said heat treatment.**

12. (canceled).

13. (currently amended) A method for producing a synthetic quartz glass member as claimed in Claim **11** ~~12~~, wherein the synthetic quartz glass body is heat treated **in** ~~under~~ the

atmosphere containing hydrogen for a first predetermined time duration under a first pressure setting, and is further heat treated for a second predetermined time duration under a second pressure setting that is lower than said first pressure setting.

14. (original) A method for producing a synthetic quartz glass member as claimed in Claim 11, wherein the atmosphere containing hydrogen consists of 100 % gaseous hydrogen or a mixed gas containing hydrogen together with nitrogen, argon, or helium.

15. (canceled).

16. (original) A method for producing a synthetic quartz glass member as claimed in Claim 13, wherein the atmosphere containing hydrogen consists of 100 % gaseous hydrogen or a mixed gas containing hydrogen together with nitrogen, argon, or helium.

17. (original) A method for producing a synthetic quartz glass member as claimed in Claim 11, wherein the synthetic quartz glass body in which hydrogen is incorporated is prepared by either a direct flame hydrolysis method or an indirect flame hydrolysis method.

Claims 18 to 30 (canceled).

31. (new) A method for producing a synthetic quartz glass member as claimed in Claim 11, wherein the pressure of the atmosphere containing hydrogen is decreased continuously in the heat treatment.

32. (new) A method for producing a synthetic quartz glass member as claimed in Claim 11, wherein the pressure of the atmosphere containing hydrogen is decreased stepwise in the heat treatment.